



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	10/657,533
Filing Date	September 8, 2003
First Named Inventor	Hector F. DeLuca
Art Unit	
Examiner Name	

Attorney Docket Number 1256-00921

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If Known)			
BB		US- 5,945,410	08/31/1999	DeLuca et al	
		US- 5,936,133	08/10/1999	DeLuca et al	
		US- 5,877,168	03/02/1999	Miyamoto et al	
		US- 5,849,726	12/15/1998	Brenner	
		US- 5,846,960	12/08/1998	Labrie	
		US- 5,843,928	12/01/1998	DeLuca et al	
		US- 5,843,927	12/01/1998	DeLuca	
		US- 5,817,648	10/06/1998	Kutner et al	
		US- 5,587,497	12/24/1996	DeLuca et al	
		US- 5,578,587	11/26/1996	DeLuca et al	
		US- 5,536,713	07/16/1996	DeLuca et al	
		US- 5,246,925	09/21/1993	DeLuca et al	
		US- 5,237,110	08/17/1993	DeLuca et al	
		US- 5,089,641	02/18/1992	DeLuca et al	
		US- 5,086,191	02/04/1992	DeLuca et al	
		US- 4,666,634	05/19/1987	Miyamoto et al	
BB		US- 4,800,198	01/24/1989	DeLuca et al	
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁴
		Country Code ³ "Number" "Kind Code ³ (If Known)				
BB		0184206	12/1985	Europe		
BB		0078704	04/1987	Europe		
		0387077	09/1990	Europe		
		0474517	11/1992	Europe		
		0480572	04/1992	Europe		
BB		0516410	12/1992	Europe		

Examiner Signature

Padie

Date Considered

6/18/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.87 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND T : Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



DEC 12 2003

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 4

Complete if Known	
Application Number	10/657,533
Filing Date	September 8, 2003
First Named Inventor	Hector F. DeLuca
Art Unit	
Examiner Name	
Attorney Docket Number	1256-00921

U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS				
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Country Code ² "Number ⁴ "Kind Code ⁵ (If known)		
BB	WO90/09991		09/1990	PCT
BB	WO96/01811		01/1996	PCT

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language transcription is included.

Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND T : Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)

Approved for use through 07/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

Compliant to If Known

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

3

of

4

Application Number

10/657,533

Filing Date

September 8, 2003

First Named Inventor

Hector F. DeLuca

Art Unit

Examiner Name

Attorney Docket Number

1256-00921

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (In CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
BB		Chemical Abstracts, XP-002066055, Vol. 121, No. 21, November 21, 1994.	
		Posner et al, "2-Fluoroalkyl A-Ring Analogs of 1,25-Dihydroxyvitamin D3-Stereocontrolled Total Synthesis via Intramolecular and Intermolecular Diels-Alder Cycloadditions.-Preliminary Biological Testing", Journal of Organic Chemistry, 60, pp. 4617-4628, 1995.	
		Slatopolsky et al, "A New Analog of Calcitriol, 19-Nor-1,25-(OH)2 D2 Suppresses Parathyroid Hormone Secretion in Uremic Rats in the Absence of Hypercalcemia", American Journal of Kidney Disorders, 26(5), 832-60, 1995.	
		Posner et al, "Stereocontrolled Synthesis of a Trihydroxylated A Ring as an Immediate Precursor to 1Alpha,2Alpha,25-Trihydroxyvitamin D3", Journal of Organic Chemistry, 56, pp. 4339-4341, April 15, 1995.	
		Chemical Abstracts, "Chemistry of Synthetic High Polymers", Vol. 110, No. 10, Abstract 110: 82505v, March 6, 1989.	
		Okano et al, "Regulatory Activities of 2Beta-(3-Hydroxypropoxy)-1Alpha,25-Dihydroxyvitamin D3. A Novel Synthetic Vitamin D3 Derivative on Calcium Metabolism", Biochemical and Biophysical Research Communications, Vol. 163, No. 3, pp. 1444-1449, September 29, 1989.	
		Bouillon et al, "Biological Activity of Dihydroxylated 19-Nor-(Pre)Vitamin D3", Bioactivity of 19-Nor-Pre D, Vol. 8, No. 8, pp. 1009-1015, 1993.	
		Sarandeses et al, "Synthesis of 1Alpha,25-Dihydroxy-19-Norpervitamin D3", tetrahedron Letters, pp. 5445-5448, April 1992.	
		Perlman et al, "1Alpha,25-Dihydroxy-19-Nor-Vitamin D3. A Novel Vitamin D-Related Compound with Potential Therapeutic Activity", Tetrahedron Letters, Vol. 31, No. 13, pp. 1823-1824, February 1990.	
BB		Baggolini et al, "Stereochemical Total Synthesis of 1Alpha,25-Dihydroxycholecalciferol and 1Beta,25-Dihydroxyerocalciferol", Journal of Organic Chemistry, 51, pp. 3098-3108, 1986.	

Examiner Signature	DeLuca	Date Considered	6/18/04
--------------------	--------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

4

of

4

Complete if Known

Application Number	10/657,533
Filing Date	September 8, 2003
First Named Inventor	Hector F. DeLuca
Art Unit	
Examiner Name	
Attorney Docket Number	1256-00921

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
BB		Kieglei et al, "Chemical Conversion of Vitamin D3 to its 1,25-Dihydroxy Metabolite", Tetrahedron Letters, Vol. 31, No. 43, pp. 6057-6060, 1991.	
		Sicinski et al, "New 1Alpha,25-hydroxy-19-Norvitamin D3 Compounds of High Biological Activity: Synthesis and Biological Evaluation of 2-Hydroxymethyl, 2-Methyl, and 2-Methylene Analogues", Journal of Medical Chemistry, 41, pp. 4662-4674, 1998.	
		Brown et al, "New Active Analogues of Vitamin D with Low Calcemic Activity", Kidney International, Vol. 38, Suppl. 29, 1990, pp. S-22-S-27	
BB		Hareau et al, "Asymmetric Synthesis of 1Alpha,25-Dihydroxyvitamin D3 A-Ring Precursor Starting with 5-Tert-Butyldimethylsiloxy-2-Cyclohexenone", Tetrahedron Letters, 41, 2000, pp. 2385-2388	

Examiner Signature	<i>DeLuca</i>	Date Considered	6/18/04
--------------------	---------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.